DOCUMENT RESUME

ED 101 720 IR 001 572

AUTHOR	Grogan, Nancy M.
TITLE	UNM General Library/Technology Application Center Literature Search Service, An Experimental Program, FY 1974. Final Report.
INSTITUTION	New Mexico Univ., Albuquerque. Technology Application Center.
SPONS AGENCY	National Aeronautics and Space Administration, Washington, D.C.
PUB DATE	Sep 74
NOTE	50p.
EDRS PRICE	MF-$0.76 HC-$1.95 PLUS POSTAGE
DESCRIPTORS	*Computer Oriented Programs; Computers; Data Bases; Evaluation; Information Dissemination; *Information Retrieval; *Information Services; Information Sources; Library Services; Questionnaires; *Search Strategies; *University Libraries; Use Studies
IDENTIFIERS	New Mexico; University of New Mexico

ABSTRACT

In July 1973 the University of New Mexico's General Library, in cooperation with the Technology Application Center, introduced a computerized search service for faculty members on a one-year experimental basis. During the study two user evaluation meetings caused some improvements to be made, particularly in the area of working more closely with faculty members in exploring the scope and depth of searches to be made. The final evaluation disclosed that faculty members particularly appreciated the time saved by the service and the comprehensive, up-to-date searches. Many planned to make greater use of the service. The conclusion reached by the study was that the project contributed significantly to improving the quality and quantity of the teaching and research conducted by faculty users and did it in a cost effective manner. The appendixes include a list, with brief descriptions, of the 29 computerized information bases; the evaluation instruments and user comments; a list of searches performed; and a tally of searches provided for each university department. (Author/LS)

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UNM GENERAL LIBRARY/ TECHNOLOGY APPLICATION CENTER LITERATURE SEARCH SERVICE AN EXPERIMENTAL PROGRAM FY 1974 FINAL REPORT

Prepared by:

Nancy M. Grogan
Technology Application Center

September, 1974

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INTRODUCTION

In July 1973, the University of New Mexico's General Library, in cooperation with the Technology Application Center (TAC), introduced to the University community a new dimension in literature research: a computerized search service for faculty members. Designed to provide greater depth to the support of teaching and research than previously available, this one-year experimental program became possible through the interactive use of the information resources of both organizations. This report highlights the principal events of that program.

PROGRAM DESIGN

Behind the start-up of the new program lay a number of months of planning and negotiation. The Library need for computerized data capability (beyond that afforded by the ERIC[1] file) formed the basis for beginning discussions. TAC, with its access to 29 computerized worldwide information bases (Appendix A), could supply this capability. Discussions began early in the spring, and in the ensuing weeks the design of the program took form. Agreement was reached on costs, type of searches (e.g., retrospective, current awareness), processing mode, response time, requirements, procedures and ground rules for use, and evaluative feedback processes. One staff member from each organization was designated program function responsibility--Zanier Lane, Science/Engineering

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[1]Education Resources Information Center (a data base owned by the University and searched directly on the Campus)

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Reference Librarian for the General Library, and Eugene Burch, Assistant Director and Information Center Manager for TAC. To underwrite the program the Library reserved $20,000 from its budget for the one-year period of performance. The contractual agreement was prepared, approved by the University administration, and signed on July 1.

PROGRAM OPERATION

The first joint retrospective search under the new program was related to the current energy crisis. It was performed for a faculty member preparing for an eleven-week systems design study on the use of hydrogen as an energy carrier and source. The report stimulated wide interest and led ultimately to publication by TAC of Hydrogen Energy 1953-73, now being sold nationally by both TAC and the National Technical Information Service (NTIS) of the Department of Commerce. By the end of the first quarter of operation, 22 searches either had been completed or were underway.

In mid-October planning began for two user evaluation meetings. The first of these took place on November 29 at which time the number of searches totaled 51. The responses to a brief pre-meeting questionnaire (Appendix B) were for the most part favorable, and the faculty members who attended the meeting were generally enthusiastic and supportive of the program. Specific suggestions regarding the conduct of the program included:

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- Developing a more readable format and improving reproduction quality
- Providing selective extension of searching beyond computerized sources
- Including in the delivered product a listing of data bases searched
- Clarifying identification of reference index symbols, improving the terminology used, and eliminating unnecessary material*
- Providing opportunity for faculty members to interface and work more closely with TAC staff members assigned to carry out the searches

*Some general disappointment was expressed with search results, largely in the form of "too much garbage" i.e., irrelevant material outside and beyond the interest and need of the requester.

Following the meeting, modifications to the program to incorporate faculty recommendations were set in motion. One change, that of a pre-search meeting with the user in which the nature of the question and the scope of the search were explored in depth, proved invaluable in enhancing the end product. Several side benefits also ensued--TAC gained a new awareness and perception of the needs of the faculty, and the academic community, in turn, gained a new perspective on the capabilities of TAC and the complexity and professionalism involved in the design and production of searches.

The number of requests for searches climbed steadily as the spring semester progressed. By the end of March an additional 26 searches had been requested for a total of 77. Feedback from search evaluations in this period began to show the positive effects of the modifications. It became evident that the active participation of the faculty member in the designing and carrying out of the

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search procedures had considerably improved the final product.

By early May a total of 87 searches plus two current awareness service projects had been completed. In addition, several faculty members had ordered and paid (from their own funds) for second searches.

A final evaluation review was held on May 9. Following the format of the first meeting, a second pre-evaluation questionnaire was sent out with 75% of the users responding. Of the 63 returns, all favored continuing the service. The two most recurring reasons were:

(1) Time saved

(2) A more comprehensive, up-to-date search

Other data gathered from the questionnaire included the following:

- 40 faculty members expect to request a new literature search next year
- 21 plan to request an update of this year's search
- 42 would prefer a graduate student from their own department to assist with strategy development, evaluation, and organization of their search.

Results of this session brought even more favorable feedback than the first user assessment. A general feeling was expressed by many of the attendees that this kind of service should not be considered as an alternative to, or in competition with, the acquisition of books or other kinds of materials. Rather, attendees said, both are wanted and needed, and the question of choice or tradeoff does not apply.

Thirteen more searches as of May 22 brought the number of requests to 100 (Appendix C), the agreed upon cutoff for the year.

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The searches and current awareness services throughout this period covered a variety of fields, 53% falling in social sciences and humanities, and 47% in science and engineering areas. Approximately 40% of University academic departments were served. Those departments with the greatest number of users were Education, Biology, Chemistry, Speech Communication, Geology, and Business Administration. A summary listing of users and purposes to which services were put is included as Appendix D.

PROGRAM SUMMARY

A recap of the year's activities indicates that:

- Faculty members have a definite need for computerized literature search services. Principal reasons: greater speed, comprehensiveness, and flexibility than can be obtained by using more traditional search techniques. As more faculty members became aware of the value of the service, use of the service increased steadily.

- A few first-time users of the service became repeat users at their own expense. Moreover, some users have indicated they will write into future grant proposals a line-item for literature searching.

- Time-savings was an enormous plus. Users reported the time saved in literature searching ran from 5 hours to "at least one year of full-time work."

- There remains some concern about irrelevant material, which may be a question of unrealistic expectations or improper focus on search strategy. Most satisfied users invested substantial amounts of time with Library and TAC operating people to work out progressively better search strategies in their particular problem areas. In the absence of such effort, search results may be disappointing.

BENEFITS

A. Faculty Users

Since the intent of this experimental project was to provide a new and improved information and library service to the academic community, the faculty users must be the ultimate judges of benefits accruing from the program. As mentioned earlier in this report, TAC used three means of obtaining faculty feedback--feedback provided from search evaluations, from user assessment meetings, and from program evaluation questionnaires. This section of the report includes only highlights of that feedback.

Additional comments regarding the value of the service are included as Appendix E. Examining the overall evaluation process, it becomes apparent there are a number of specific benefits which faculty users consider important, e.g.,

- Savings of time and money with additional benefit of reducing time required in completing research and proposals as well as support for preparation and presentation of papers
- Availability of sources of material not accessible in the Library nor through the normal process of manual searches
- Aid in development of new and more up-to-date curriculum
- More effective use of graduate students by providing support and stimulation for research and dissertation work as well as providing additional time for the student to spend in the laboratory or in intellectual pursuit of subject matter.
- and finally, an inherent benefit to the University in terms of promoting its image as a quality institution because of the impact that the expanded literature background has on papers, presentations, proposals, and so forth.

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The following quotes reflect in the faculty members' own words the benefits summarized above:

Dr. Douglas Ferraro, Professor of Psychology
Search: Effects of Drugs on the Acquisition or Performance of Discrimination and Generalization of Stimuli by Animals

"This search is of direct value to me in that it supports my professional activities of research and writing. Indeed, it facilitates these activities in a way that is simply not replaceable. Since the search supports research and the obtaining of research monies it has indirect value to students, departments and the University as a whole in the same way as other supporting agents (e.g. the computer center) and is equally important as any of these."

Dr. Jonathan Callender, Geology
Search: Melange Structures

"A great time-saver, and a tremendous asset for gathering references from foreign journals (usually not readily available)--useful teaching aid."

Dr. Charles Beckel, Professor of Physics/Astronomy
Search: The Electronic Structure, Conformations and Conformational Energies of Nucleosides, Nucleotides, Polynucleotides, DNA and RNA

"It has located articles or dissertations I probably would not find, and has saved me an enormous amount of time in locating literature I would have found."

"Has provided me with an up-to-date summary of expert theoretical work in which one of my students has been working, and in which I have a broad continuing interest."

"At least two Professors in England borrowed and made use of my Retrospective Review Service copy. Others who have seen my copy agree on the value of this service."

"I estimate this report has saved me 500-1000 hours of research."

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Dr. Billy J. Watson, Special Education
Search: Short-Term Memory Studies on Normal and Handicapped Children, Ages 3-15

"The single search I was allowed to initiate has been very helpful. On the basis of this preliminary search two studies have been completed (one was reported at an International Conference) and data collection is underway in a third study."

"Provided the comprehensive information necessary to formulate research hypotheses."

"Two students are involved in research stimulated by the search."

"The availability of information is a key requirement in developing student research in doctoral programs. I feel the searches ease the load of already heavy schedules for professors and students. A research presentation by a student and faculty member at the International Convention of the Council for Exceptional Children should be good PR for the University."

Dr. Thomas M. Niemczyk, Chemistry
Search: Infrared-Excited Visible Luminescent Materials

"Invaluable aide in the preparation of proposals and for obtaining a picture of the research being conducted in a particular field."

"Was a tremendous aide in the preparation of a research proposal. It clearly (with some organization) pointed out what work had been done in the field, gave me some new ideas of work to be done and pointed out some papers with which I was not familiar."

"I believe this proposal will be funded, benefiting the University, supporting a graduate student, etc."

"It is difficult to estimate the number of hours which the literature search service may have saved me--maybe 1/3 of total proposal time--240-50 hours."

Dr. Byron T. Lindsey, Modern Languages
Search: Russian (Soviet) Painting and Sculpture

"It is an extremely valuable research resource, compensating to some extent for the limited sources in my field here. It saved me considerable time: this I especially appreciate. My teaching load is quite heavy."

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"The search material helped me finish a paper ahead of schedule; it also gave me a more complete survey of the topic than I would have been able to do for myself. Aside from the direct research benefits, it has helped me keep informed in my field of special interest. This, of course, helps me in teaching. I can refer students interested in the topic to the primary sources."

"My paper, largely based on the search material, brings a measure of prestige to the department and the University."

Dr. Calvin A. Roberts, Criminal Justice
Search: Educational Programs & Schools for Truants, Juvenile Delinquents and Juvenile Ex-offenders

"UNM personnel can find this a most valuable implement in isolating the scope of their research--and, after all, research for academic and social improvement is a major function of a university."

"It broadened and clarified my knowledge of my area of research. Also, it was of inestimable value as a timesaving tool. Because of the search results I am 50% farther along with my study."

"I really cannot rave enough about the TAC service!"

Dr. Charles T. Siemers, Geology
Search: Modern and Ancient Biogenic Sedimentary Structures

"It is absolutely necessary in my research as well as in an up-to-date teaching program."

"My search request on trace fossils was extremely valuable since I edit and compile a yearly newsletter on this topic. The newsletter has a distribution of about 550 with more than 250 outside of the U.S. Such information is also needed in my ongoing research."

"It is difficult to estimate value of search in number of hours when one considers that a literature search using GEOREF and other services will turn up references that would be completely missed otherwise."

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Dr. Elaine Dittmar, Chemistry
Search: Electron Transfer (Oxidation-Reduction) Reactions of Transition Metal Complexed in Solution

"In a search on a related subject, I have spent approximately 100 hours in the library and have not yet finished the search."

"While it is essential that the student learn to use library facilities effectively, he can learn as much in running down references contained in the computer searched bibliography as in compiling the bibliography. Computer searching increases student laboratory time and decreases total time required for a degree. Student time is more effectively used comprehending material than in searching for it."

"I suspect that the tone of the department will change as more computer searching is done. The laboratory should be a place of excitement. The greater the time spent in the lab, the greater the probability that this will be so. Excitement feeds on itself and breeds an exciting department."

"A university is noted by the works produced by its scholars. Computer searches should lead to more scholarly works."

Dr. Howard McConeghey, Art
Search: Art Therapy

"Saving of many hours of time and a more complete search than I could do. Helpful in preparing lectures and lesson plans. Helpful in personal research."

"Important in establishing a quality program in art therapy--to establish needed references and indicate the quality of present library holdings."

Dr. John Gluck, Psychology
Search: Effects of Early Experiences on Learning

"Number of hours service saved is virtually incalculable. It has saved at least 300 hours immediately but will continue to save time in future teaching situations."

"The service is more than adequate. The problem has to do with frequency of allowable use as well as the limited population services. Graduate students could of course benefit from the service. If limitations must be made I would still permit access to graduate students in their dissertation year."

"Given that the products of the service lead to individual growth, better research background, and more informed teachers, central hard funding seems essential. Perhaps the service could be partially or totally funded with research overhead monies. Certainly investigators should include service support as a bigger line item in grant appropriations as well. The service leads to overall excellence and therefore deserves priority funding."

DATE: May 1, 1974

TO: President Heady

FROM: Frank A. Logan, Psychology Frank A. Logan

SUBJECT:

The purpose of this memorandum is to enter in the file my strong endorsement of the service provided this year by the Literature Search Service of TAC. I took advantage of this opportunity to obtain an update of my reference material in the area of Discrimination Learning, a topic on which I am preparing a major monograph and on which I was teaching a graduate seminar this semester. I found the product of this search to be extremely valuable in both contexts.

I hope that funds can be made available to continue this service in the future. From my own experiences more broadly, I am confident that this type of retrieval procedure will become increasingly critical to a major research center, and UNM should certainly keep abreast of these developing resources. I grant that they are limited because the explosion of new material virtually precludes catching up with the earlier work, and that there are refinements that could improve the value of the service. Nevertheless, I was impressed by the quality of work done here and would strongly encourage its continuance.

FAL:eo

cc: V. P. Travelstead
V. P. Silverman
Dean Wollman
Dean Harvey
Director Olivarez
Director Shinnick
L. Lane

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July 2, 1973

Mr. J. F. Harvey
Dean of Library Services
Zimmerman 151

Dear Mr. Harvey:

I wish to congratulate your staff and that of the Technology Application Center on the two excellent literature searches they performed for me. This has saved me an enormous amount of work in addition to finding articles which I don't think I would have found. The search for papers related to effects of salt on vegetation identified about 75 papers we were not aware of. The organization and presentation of the literature has made it a very useful document for myself and my students.

This is an extremely valuable service which I hope can be continued. I certainly plan to make use of it in the future.

Sincerely,

James R. Gosz

JRG:dr

cc: Zanier Lane
Eugene Burch

COPY

THE UNIVERSITY OF NEW MEXICO
ALBUQUERQUE, NEW MEXICO 87106

DEPARTMENT OF PSYCHOLOGY
TELEPHONE: 505 277-4121

March 26, 1974

Dr. W. A. Shinnick
Technology Application Center
University of New Mexico
Albuquerque, NM 87131

Dear Dr. Shinnick:

I have just finished reviewing a literature search on the topic of "Effects of CNS Drugs on Learning" prepared for me by TAC. The output is excellent and will be most helpful to me in my work. This letter is to express my appreciation for the interest and cooperation I received in interacting with TAC. Thank you.

Sincerely yours,

Douglas Peter Ferraro
Professor

DPF/yp

B. Library/TAC

That the Library considers this program highly beneficial and worthwhile both academically and economically is evidenced by a new proposal submitted to the UNM Office of Research and Graduate Affairs requesting additional funding for expansion of the services. Incorporated within that proposal are a series of statements on benefits which have accrued to the University through the program. The Library has granted permission to TAC to reproduce those statements in part for inclusion as follows:

> The University has realized widespread benefits from the Literature Search Service:
>
> The Reference Department, which is the first point of contact in seeking information whether the user is faculty or student, is able to see the overall scope of research and curricula interests and activities and to become a clearinghouse for campus information. The Library's liaison position in the LSS increases the effectiveness of the Library professional staff.
>
> The LSS emphasizes the multidiciplinary nature of information and also the multi-departmental nature of research. At the May user meeting, Dr. Peter Montague, Architecture, stated that of the 88 searches at that time, 28 were of value to Architecture graduate students. The energy crisis has led to searches on resources for Geology such as "Geothermal Resources", searches on applications for Engineering such as "Research in Coal Gasification", and environmental searches for Biology such as "Reclamation and Revegctation of Surface Mining Sites".
>
> In terms of dollars, the value of the service may be computed by comparing it to the investment of an overwhelming number of faculty hours used to go to the library, manually search many periodical indexes, copy citations and abstracts, evaluate and organize the material, print and bind the report. Dr. Charles Beckel, Physics, wrote: "I estimate this report has saved me 500-1000 hours of research."
>
> The LSS provides strong research support. It indicates "hot spots" in a field and suggests ideas for possible

projects. It is especially useful for initial research in new fields for faculty members who do not yet have funded projects. It is vital to faculty members working in areas of research where funds are not available.

Successful research proposals bring money to the University in research overhead, and funded projects provide jobs for graduate students over the contract years.

Research grants, book and journal publications, conference papers, and innovative courses - all of which receive information support from the LSS - bring prestige to the faculty and to the University.

The LSS strengthens UNM in its competitive position with other educational and research institutions and aids in attracting and retaining faculty and students.

Professors who are encouraged by their administration to develop their full professional potential generate inspiration and enthusiasm in classrooms and laboratories.

Also worthy of mention are benefits which accrued to TAC specifically. Prime among these was benefit to TAC in terms of its continuing growth as an Information Center, particularly in the social sciences and related areas. Although highly competent in scientific and engineering areas the Center found itself ill-prepared for such broad sociological and cultural search questions as "American Gypsies: Cultural and Education Problems," "Communication Behavior of Male Homosexuals," and "Russian Painting and Sculpture." To handle such questions, TAC added skilled resource people in social sciences to its staff and began acquiring access to available data bases in the associated areas. It is, however, still limited in response capability to questions in the specific fields of music, history, and art. Limitations in some of these areas will continue to be a restricting factor because extensive computerized files have not yet been generated. Another confining

factor is the agreement that TAC search only the computerized bases. While there have been a few exceptions to this restriction--cases where some manual searching and other means have been employed in order to provide augmentation to the search--the Library does not normally consider manual searching by TAC economically feasible. This has been partially relieved by some of the departments making graduate students available to manually supplement the search via the Library.

Other specific benefits include:

- Upgrading of the technical competence of those staff members who participated in the program plus contributing to their intellectual growth
- Enhancement of TAC image on campus via increased exposure--the growing appreciation on the part of the faculty for the research assistance TAC can provide is most rewarding
- Student employment opportunities--additional graduate and undergraduate students found jobs as TAC expanded its work force to carry out the program.

CONCLUSION

It seems clear, particularly based on the comments of the faculty users, that this project has achieved its intended purpose and has contributed significantly to improving the quality and quantity of the teaching and research conducted by the faculty users. Moreover, it has achieved this benefit in a cost effective manner, even though specific economic benefits or gains cannot be calculated.

APPENDIX A

INFORMATION RESOURCES

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INFORMATION RESOURCES

The following list describes the computerized information resources currently available to the Technology Application Center for searching purposes.

COMPUTER-SEARCHABLE INFORMATION RESOURCES

January 1, 1974

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

The NASA file, dating from 1962, contains more than 590,000 documents and grows at the rate of 70,000 new entries each year. It is approximately 16% NASA-generated, the bulk of the citations being reports (both published and unpublished) collected by NASA from worldwide sources for use in the aerospace program. These articles are abstracted in two semi-monthly journals: INTERNATIONAL AEROSPACE ABSTRACTS (IAA) and SCIENTIFIC AND TECHNICAL AEROSPACE REPORTS (STAR). Search services available: 1 and 2*

U.S. GOVERNMENT REPORTS ANNOUNCEMENTS

The GRA file dates from October 1970 and provides excellent coverage on the physical sciences, social and life sciences, and economics. At the rate of some 2,000 citations monthly, GRA describes the technical publications issued by the various federal agencies. A retrospective search of this file will include the Defense Documentation Center file of 120,000 unclassified documents dating from mid-1964 to October 1970. Current DDC information is announced in GRA. Search services available: 1 and 2*

ENGINEERING INDEX

The Engineering Index file dates from January 1968 and is a monthly review of over 3,500 journals, conference proceedings, and other types of publications from all parts of the world. EI is a transdisciplinary information service for engineers, technicians, and scientists needing comprehensive guides for engineering literature. This file contains about 375,000 documents and is growing at the rate of approximately 75,000 citations per year. Search services available: 1, 2, and 3*

CHEMICAL ABSTRACTS CONDENSATES

CAC is prepared by the American Chemical Society. The Condensates file, beginning in July 1968, includes the complete contents of CHEMICAL ABSTRACTS which covers approximately 13,000 journals and 30,000 patents annually. Alternate issues deal with different areas of chemistry, and searches may be made accordingly. There are now about 300,000 abstracts appearing in CA each year. Search services available: 1 and 2*

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IFI/PLENUM UNITERM INDEX TO CHEMICAL PATENTS

The IFI file, the largest computerized collection of patents in the world, covers U.S. chemical and chemically-related patents. At present it contains references to more than 280,000 U.S. patents issued since 1950 and cited in the U.S. Patent Office's OFFICIAL GAZETTE. Also included are their foreign equivalents issued in Great Britain, France, Germany, Belgium, and The Netherlands. Search services available: 1*

EDUCATIONAL RESOURCES INFORMATION CENTER

The ERIC file is a project of the Department of Health, Education and Welfare. It contains about 122,000 citations from the journals RESEARCH IN EDUCATION AND CUMULATIVE INDEX TO JOURNALS IN EDUCATION, and dates from 1968. This file, which is updated quarterly, is chiefly concerned with research in the primary and secondary education fields. Search services available: 1 and 2*

WORLD TEXTILE ABSTRACTS

WTA is a consolidation of world textile literature, a result of collaboration between five textile research associations in England. This file, which begins in January 1970, contains about 55,000 citations and is expected to grow by 900 monthly. The ten subject categories cover all phases of textile production. Search services available: 1 and 2*

INSTITUTE OF TEXTILE TECHNOLOGY

The ITT file contains nearly 80,000 documents dating from 1966 to the present. Articles are abstracted in the TEXTILE TECHNOLOGY DIGEST which is published monthly with about 1,000 abstracts in each issue. Approximately 70% of the coverage is journal literature; about 30% is patent coverage - both from worldwide sources. Search services available: 1 and 2*

MIT TEXTILE INFORMATION SYSTEM

The MIT file, containing about 11,000 items, covers the period 1950 through 1967 and is a closed file. Abstracts have been selected from the JOURNAL OF THE SOCIETY OF DYERS AND COLOURISTS and the JOURNAL OF THE TEXTILE INSTITUTE, and include both journal and patent citations. Search service available: 1*

BIOLOGICAL ABSTRACTS

The BA file is a consolidation of biological information from worldwide sources, obtained by review of 7,400 life science journals. A computer-indexed portion dates from September 1959 and contains some 1.5 million abstract references. This may be searched by one or more of four indexes: B.A.S.I.C., which includes both key word and subject indexes; an index by author; and a biosystematic (taxonomic classification) index. Search services available: 1 and 2*

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MEDLINE

For retrospective searching, MEDLINE gives on-line access to the contents of approximately 1,300 of 2,400 journals covered by INDEX MEDICUS, which is published monthly by the National Library of Medicine. Coverage at present begins in January 1970 and to date there are over 400,000 citations in the system. New references are being added at a rate of 12,000 per month. For monthly current awareness searching, the data base is the entire 2,400 journals - not just the 1,300 in the retrospective file. TAC has access to the National Library of Medicine's MEDLINE network through the Medical Sciences Library of the University of New Mexico in Albuquerque. Search services available: 1 and 2*

FOOD SCIENCE AND TECHNOLOGY ABSTRACTS

The International Food Information Service, widely recognized as the world's leading information service in food science and technology, has as its primary output the monthly journal FOOD SCIENCE AND TECHNOLOGY ABSTRACTS (FSTA). Document abstracts, selected from more than 1,200 journals (plus some patents and books), are added to FSTA at the rate of approximately 1,100 per month. Search services available: 2* (1 will be offered soon).

SMITHSONIAN SCIENCE INFORMATION EXCHANGE

Unlike other data bases which record only completed work, SSIE covers research projects currently in progress. SSIE annually collects from 85,000 to 100,000 records of on-going research funded by both private and public sources; however, the emphasis is on federally-funded projects. The collection covers all phases of basic and applied research in the physical, life, social and behavioral sciences, and engineering. The two most recent years are included in a retrospective search. Current awareness searches are available on a quarterly basis. Search services available: 1 and 2*

TOXICITY BIBLIOGRAPHY

The Toxicity Bibliography file, dated from January 1968, contains more than 70,000 citations with index terms on articles of toxicity studies, adverse drug reactions, and poisonings in humans and animals. Search services available: 1 and 2*

CHEMICAL-BIOLOGICAL ACTIVITIES

The Chemical-Biological Activities file contains more than 165,000 citations with abstracts and Chemical Abstracts Service (CAS) registry numbers on current scientific and technical literature as compiled by the Chemical Abstracts Service. The file dates back to 1965 and is current through June 1973. Search services available: 1 and 2*

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ABSTRACTS ON HEALTH EFFECTS ON ENVIRONMENTAL POLLUTANTS

This file dates from January 1972 and at present contains 14,000 citations, most of them with abstracts and CAS registry numbers, of articles on the effects of chemicals---other than medicinal---on humans and animals, and analytical methodology taken from the abstract journal produced by Biological Abstracts. Search services available: 1 and 2*

INTERNATIONAL PHARMACEUTICAL ABSTRACTS

The International Pharmceutical Abstracts, dated from January 1970 to March 1973, contains 16,500 citations with abstracts of articles on new trends and developments related to drugs from the American Society of Hospital Pharmacists. Search services available: 1 and 2*

HEALTH ASPECTS OF PESTICIDES

The Health Aspects of Pesticides contains more than 13,000 citations with abstracts and CAS registry numbers of articles on the health effects of pesticides in human and animals; pesticides residue analysis and monitoring. The file covers the time period from January 1966 through June 1973. Search services available: 1 and 2*

HAYES FILE ON PESTICIDES

This file covers the time frame from 1950 through 1966 and consists of an unpublished collection of more than 10,000 citations of articles on health effects of pesticides. Search services available: 1*

BIBLIOGRAPHY OF AGRICULTURE

The complete Bibliography of Agriculture file is from the National Agricultural Library. The file consists of over 400,000 records and has coverage from 1970 to present. This data base provides comprehensive worldwide coverage of the literature on agriculture. Search services available: 1 and 2*

PSYCHOLOGICAL ABSTRACTS

The American Psychological Association has issued the psychological abstracts since 1967. This file provides comprehensive coverage of the world's leading journal articles in psychology. The file contains more than 125,000 citations. Search Services available: 1 and 2*

BEST COPY AVAILABLE

THE NEW YORK TIMES INFORMATION BANK — This information bank will search through thousands of documents in seconds to bring hard facts on reports, speeches, public statements, press releases, etc., as announced in the New York Times, other journals and newspapers. The file dates from 1970 to present. Search services available: 1 and 2*

SCIENCE CITATION INDEX SEARCH SERVICE — The Science Citation Index contains a complete range of scientific and technical literature that makes searches easier and more productive. It identifies cross disciplinary relationships missed by the conventional subject indexes. The file is very useful to scientists, technologists, product and market planners and research management. The file is growing at a rate of 370,000 journal articles per year. Search services available: 1 and 2*

SOCIAL SCIENCES CITATION INDEX-SEARCH SERVICE — This file is current in that it starts with literature of 1973. It contains journal literature in the social sciences and is available for searching by highly trained information scientists. Search services available: 1 and 2*

METADEX — METADEX is Metal Abstracts Index on magnetic tape. The monthly index on magnetic tape contains for each of the over 2000 articles cited:

...an average of six to eight index terms
...complete citation of the original articles
...accession numbers corresponding to abstract number in Metal Abstracts

The master file data base is available from January 1966. Search services available: 1 and 2*

INSPEC-SCIENCE ABSTRACTS — The INSPEC file consists of three major components and the user may call up any one of the following volumes: Physic Abstracts, Electronics and Electronic Abstracts and Computer and Control Abstracts. This file extends back through 1969 and comprises approximately 500,000 records.

BEST COPY AVAILABLE

ABSTRACTED BUSINESS INFORMATION (ABI) ANNOUNCEMENTS

ABI comprises 271 business-oriented periodicals. The file includes nationally acclaimed periodicals such as, The Harvard Business Review and it includes local or regional journals, for example, the Mississippi Valley Journal of Business and Economics. It permits one to search areas like business specifications, accounting, marketing, data processing, industrial relations, insurance, banking, general management, finance or advertising.

GEO·REF

GEO·REF is a service of the American Geological Institute. It offers a retrospective search service providing answers to queries addressed to its bibliographic data base containing citations from over 4000 of the world's primary geological journals, monographs and symposium proceedings from 1966 up to the most recent month's entries. Each retrieved reference contains the original language title, an English translation of the foreign title, senior and junior authors, the full publication data, and content notes: 1*

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*SEARCH SERVICES AVAILABLE

1. RETROSPECTIVE searches (from earliest date of file to latest citation)

2. CURRENT AWARENESS (regularly scheduled searches for latest information of a client-selected subject)

3. STANDARD INTEREST PROFILES (regularly scheduled searches on a topic of general interest)

APPENDIX B

QUESTIONNAIRE
FIRST USER MEETING (11-29-73)

AGENDA AND QUESTIONNAIRE FOR USER
EVALUATION AND MEETING

1. HOW DID THE SEARCH YOU OBTAINED THROUGH THIS PROGRAM MEASURE UP TO YOUR EXPECTATIONS?

LESS ____ ____ ____ ____ ____ ____ ____ MORE
(1) (2) (3) (4) (5) (6) (7)

WHY? _____

Responses: 39% -- 6 - 7 range

_____

61% -- 4 - 5 range

---

2. WHAT WAS ITS VALUE IN TERMS OF ASSISTANCE IN YOUR WORK?

LOW ____ ____ ____ ____ ____ ____ ____ HIGH
(1) (2) (3) (4) (5) (6) (7)

WHY? _____

Responses: 66% -- 6 - 7 range

_____

34% -- 4 - 5 range

---

3. HAVE YOU ANY SUGGESTIONS FOR IMPROVING THE QUALITY OF THE SERVICE?

reported in body of report (p 3)

_____

_____

_____

THANK YOU.

NAME: _____

DEPT: _____

APPENDIX C

LIST OF LITERATURE SEARCHES

UNM GENERAL LIBRARY LITERATURE SEARCH SERIES

LSS-001 "Hydrogen - A New Fuel and Energy Source"
Dr. Kenneth Cox, Chemical and Nuclear Engineering

LSS-002 "Solar Cells Produced from Gallium Arsenides and Gallium Phosphides"
R. Pancholy, Engineering Research

LSS-003 "Methods of Control of Tamarix Pentandra"
Dr. Loren D. Potter, Biology

LSS-004 "Reclamation and Revegetation of Surface Mining Sites"
Dr. James R. Gosz, Biology

LSS-005 "The Effects of Road Salting on the Environment"
Dr. James R. Gosz, Biology

LSS-006 "Communication Disorders of Prisoners"
Dr. Lloyd E. Lamb, Communicative Disorders

LSS-007 "The Electronic Structure, Conformations and Conformational Energies of Nucleosides, Nucleotides, Polynucleotides, DNA and RNA"
Dr. Charles L. Beckel, Physics

LSS-008 "Algae Produced Phosphatase Enzymes"
Dr. Gordon V. Johnson, Biology

LSS-009 "Infrared-Optical Technology"
Dr. Harold D. Southward, Engineering Research

LSS-010 "The Biology of Arid-Land Invertebrates"
Dr. Clifford S. Crawford, Biology

LSS-011 "The Chemistry and Biochemistry of the Antibiotic Actinomycin"
Dr. Ulrich Hollstein, Chemistry

LSS-012 "U.S. Government Control Over Supply and Utilization of Energy Resources"
Miss Linda Lewis, General Library

LSS-013 "Cyclobutene"
Dr. Edward A. Walters, Chemistry

LSS-014 "Short-Term Memory Studies on Normal and Handicapped Children, Ages 3-15"
Dr. Billy L. Watson, Special Education

LSS-015 "Solar Cells and Thermoelectric Generators"
Dr. W.W. Grannemann, Electrical Engineering and Computer Science

LSS-016 "Relationships Between Pupil Success and Ecological-Demographical Variables"
Dr. James G. Cooper, Educational Foundations

LSS-017 "Studies Dealing with High Altitude Lakes in the Western United States"
Dr. Roger Y. Anderson, Geology

LSS-018 "Cattle Feedlot Effect and Management"
Prof. Peter Montague, Architecture

LSS-019 "Nonrelativistic Quantum Mechanical Scattering"
Dr. Colston Chandler, Physics and Astronomy

LSS-020 "Mammalian Hibernators"
Dr. M.L. Riedesel, Biology

LSS-021 "Futurism"
Dr. Daniel M. Slate, Business

LSS-022 "Water Quality Information and Standards"
Dr. William M. Hadley, Pharmacy

LSS-023 "Cardiac Output as Measured by Ultrasound Techniques"
Dr. C. Hawkins, Electrical Engineering and Computer Science

LSS-024 "Private Long-Term Foreign Investment in Latin American 1968-1972"
Dr. Donald G. Tailby, Economics

LSS-025 "American Gypsies: Cultural and Educational Problems"
Dr. Albert Vogel, Educational Foundations

LSS-026 "Juvenile Delinquents - Sex Crimes"
Dr. Samuel Roll, Psychology

LSS-027 "Strategies for Research Dissemination"
Dr. K.C. Lersten, HPER

LSS-028 "Chemotaix in Amoebae"
Dr. Don R. McLaughlin, Chemistry

LSS-029 "Dance Forma and Dances, 1540-1850, in New Mexico, Texas, Arizona and Northern Mexico"
Dr. William M. Litchman, Chemistry

LSS-030 "Role Theory Research and Secondary School Teachers Roles"
Dr. R.L. Wagoner, Secondary Education

LSS-031 "Cadmium in the Marine Environment"
Dr. George R. Clark II, Geology

LSS-032 "Modern and Ancient Biogenic Sedimentary Structures"
Dr. Charles T. Siemers, Geology

LSS-033 "Data Accuracy, Integrity and Security"
Dr. Fred F. Newpeck, Business

LSS-034 "Dogmatism and Self-Concept"
Dr. Wayne Moellenberg, Educational Foundations

LSS-035 "Male Socioreligious Penitential Societies in Spain and Spanish Colonial New World"
Dr. Thomas R. Lyons, Anthropology

LSS-036 "Numerical and/or Analytic Analysis of Plasma Sheaths"
Dr. Willis L. Everett, Nuclear Engineering

LSS-037 "Analog, Digital, and Hybrid Control of Nuclear Reactor Power Plants, Including Analog, Digital, or Hybrid Simulation of Electric Power Plants
Dr. Robert L. Long, Nuclear Engineering

LSS-038 "Politics of School Board Elections Where Ethnic Minorities are Involved"
Dr. David L. Bachelor, Educational Foundations

LSS-039 "Tungsten Geochemistry"
Dr. Gary P. Landis, Geology

LSS-040 "Natural Resources and Water on Indian Reservations in USA"
Mr. Harvey Paymella, Native American Studies

LSS-041 "Nutrient Cycling in Natural and Disturbed Ecosystems"
Dr. James R. Gosz, Biology

LSS-042 "Motorized Recreational Vehicles"
Dr. Steve Rubio, HPER

LSS-043 "Individual Differences in Motor Learning and Performance"
Dr. John I. Todor, HPER

LSS-044 "Plates and Shells with Holes and Subjected to Combined Inplane and Laterial Loads"
Dr. Frederick D. Ju, Mechanical Engineering

LSS-045 "Auditing Communication Behavior in Complex Organizations"
Dr. Gerald Goldhaber, Speech Communications

LSS-046 "Social Effects of Sex Differences, Sex Roles"
Dr. Ralph D. Norman, Psychology

LSS-047 "The Meteorological Glory Phenomenon"
Dr. Howard C. Bryant, Physics and Astronomy

LSS-048 "Continuing Education as a Requirement for Members of the Professions"
Dr. Karl Christman, Business

LSS-049 "Geothermal Resources
Dr. George R. Jiracek, Geology

LSS-050 "The Use of Management by Objectives in Library Administration"
Mrs. Mary Ellen Hanson & Mrs. Neosha Mackey, UNM General Library

LSS-051 "Communication Behavior of Male Homosexuals"
Dr. Gerald Goldhaber, Speech Communication

LSS-052 "Russian (Soviet) Painting and Sculpture"
Dr. Byron T. Lindsey, Modern Languages

LSS-053 "Feasibility of Computers in Small Architectural Firms"
Don P. Schlegal, Department of Architecture

LSS-054 "Small Groups"
Dr. Dodd H. Bogart, Sociology

LSS-055 "Communications in Police Departments"
Dr. Estelle Zannes, Speech Communications

LSS-056 "Citizen Activism in Broadcast Criticism"
Dr. Richard M. Krause, Speech Communications

LSS-057 "Draftees and Volunteers in the Armed Forces - U.S., Britain, and West Germany"
Robert S. Landmann, ISRAD

LSS-058 "Discrimination Learning"
Dr. Frank A. Logan, Psychology

LSS-059 "The Group as a Medium for Changing Individuals"
Dr. Wayne Pace, Speech Communications

LSS-060 "Acupuncture, Electroacupuncture, Electroanesthesia, Electroanalgesia"
Dr. Richard H. Williams, Electrical Engineering and Computer Science

LSS-061 "Nutritional and Biochemical Characteristics of the Sulfur Bacteria"
Dr. Larry Barton, Biology

LSS-062 "Melange Structures"
Dr. Jonathan Callender, Geology

LSS-063 "Infrared-Excited Visible Luminescent Materials"
Dr. Thomas M. Niemczyk, Chemistry

LSS-064 "Impact of Training Programs for Top Management"
Dr. Howard V. Finston, Business

LSS-065 Current Awareness Profile
Dr. David L. VanderJagt, Chemistry

LSS-066 "Politics and Technology"
Dr. Jay B. Sorenson, Political Science

LSS-067 "The Effect of Health on Marriage Stability"
Professor David Courtney, Sociology

LSS-068 "Expenditures of Public School Physical Plant Facilities"
John D. Giesler, Continuing Education

LSS-069 "Educational Programs & Schools for Truants, Juvenile Delinquents and Juvenile Ex-offenders
Calvin A. Roberts, Criminal Justice

LSS-070 "Ion Selective Electrodes"
Professor N.E. Vanderborgh, Chemistry

LSS-071 "The Photochemical and Photophysical Properties of Chromium (III) Complexes"
William Coleman, Chemistry

LSS-072 "Research & Studies of Probation Systems, Innovative Probation Parole Methods"
Barbara Schenkel, Criminal Justice

LSS-073 "In Situ Recovery of Oil from Shale"
Herbert Nuttal, Jr.

LSS-074 "Research In Coal Gasification"
Dr. Glenn Whan, Chemical and Nuclear Engineering

LSS-075 "Effects of Drugs on the Acquisition or Performance of Discrimination and Generalization of Stimuli by Animals"
Douglas Ferraro, Psychology

LSS-076 "A Project to Develop the Criteria of an Effective Teacher in the Self-Paced Module Program"
Dianna J. McDonald, Nursing

LSS-077 "Return on Investment and/or Return on Equity on U.S. Government Cost Plus Fixed Fee Type Contracts"
John A. Yeakel, Business and Administrative Sciences

LSS-078 "Art Therapy"
Howard McConeghey, Art

LSS-079 "Electron Transfer (Oxidation-Reduction) Reactions of Transition Metal Complexed in Solution"
Elaine Dittmar, Chemistry

LSS-080 "Attitudes, Behavior, Counseling of Mental Retardation"
Glen Van Etten, Special Education

LSS-081 "Computer Assisted Instruction vs. Achievements and Success"
L. Rosasco, Education

LSS-082 "Energy Conservation Technology"
Dr. K. T. Feldman, Mechanical Engineering

LSS-083 "Attitude Formation & Change, Opinion Formation & Change, Belief Formation & Change, & Persuasion"
T. G. Plax, Speech Communication

LSS-084 "Communication in the Classroom"
Lawrence B. Rosenfeld, Speech Communication

LSS-085 "Relationship of Various Demographic Factors with a Language Behavior and Characteristics"
Jean Civikly, Speech Communication

LSS-086 "Geology and Geochemistry of Uranium Deposits"
Douglas G. Brookins, Geology

LSS-087 "Cities & Towns Built on or in the Oceans or Seas"
John Borrago, Architecture

LSS-088 "Thermodynamics Applied to Biochemical Systems"
Fritz Allen, Chemistry

LSS-089 Quick Clays & Loess as Possible Surface Materials in the Circumpolar Region of Mars
W.E. Elston, Geology

LSS-090 Medicinal Uses of the Chemical Compound Adamantane
Dr. Cary Morrow, Chemistry

LSS-091 Metal-Metallaporphyrin Exchange Reactions in Petroleum and other Solvents
Robert E. Tapscott, Chemistry

LSS-092 Geology, Biology & Oceanography of the Gulf of California, Mexico
Charles T. Siemers, Geology

LSS-093 Analysis and Design by Computer
Bruce Peterson, Electrical Engineering

LSS-094 Communication Styles in Interviews or Dyadic Interaction with Clients of Low Socio-economic Standing
Professor R. Wayne Pace, Speech Communication

LSS-095 Rock Mechanics
Johnathan Callender, Geology

LSS-096 Effects of Early Experiences on Learning
John Gluck, Psychology

LSS-097 Behavior Modification & Other Therapeutic Behavior Change in Prison Setting
Karl Koenig, Psychology

LSS-098 Impulivity
Samuel Roll, Psychology

LSS-099 Intercultural Communications
Jean M. Civikly, Speech Communication

LSS-100 Column Chromatography
T.M. Niemczyk, Chemistry

APPENDIX D

SUMMARY LISTING OF USERS AND PURPOSES OF USE

	Total Searches 1973-74
ARTS AND SCIENCES	
Anthropology	1
Biology	8
Chemistry	13
Communicative Disorders	1
Economics	1
Geology	10
Modern and Classical Languages	1
Physics	3
Political Science	1
Psychology	7
Sociology	2
Speech Communication	10
BUSINESS AND ADMINISTRATIVE SCIENCES	5
EDUCATION	
Art Education	1
Educational Foundations	5
HPER	3
Native American Studies	1
Secondary Education	1
Special Education	2
ENGINEERING	
Chemical and Nuclear	5
Electrical and Computer Science	4
Mechanical	2
FINE ARTS	
Architecture	3
NURSING	1
PHARMACY	1
BUREAU OF ENGINEERING RESEARCH	2
CONTINUING EDUCATION	1
GENERAL LIBRARY	2
ISRAD	1
Criminal Justice Program	2
TOTALS	100

Use analysis of 100 searches, 1973-1974:

Curriculum development, teaching, student research -	*55%
Publications or conference papers	33%
Research proposals or projects	64%

*The majority of searches were used in two or more of these areas.

APPENDIX E

ADDITIONAL USER COMMENTS RE VALUE OF SERVICE (SECOND QUESTIONNAIRE 4-24-74)

Excerpted from second questionnaire (4-24-74).

PLEASE COMMENT ON THE DIRECT AND INDIRECT VALUES OF YOUR SEARCH:

"I have an excellent search that is broad enough to cover several areas of interest to me. I am also interested in several of the searches filed in the library."

"A great time saver and much benefit to the research to have a really thorough search."

"Makes a more solid grant application generating equipment and overhead."

Dr. Allen, Chemistry

"It provided me with a number of interesting references that were new; it searched a wider base than I would have, giving me confidence that nothing important has been overlooked; it searched areas that I am interested in for future research work."

"It furthered my research. The search has also been used by A.G. Gibson in the Math Department."

Dr. Chandler, Physics

"Saved me a good deal of time; poked into sources I might have missed."

"It may result in some publishable research."

Dr. Courtney, Sociology

"Provided initial step in the compilation of "Hydrogen Energy" Aided in NASA-ASEE 1973 summer design institute. Used for proposal writing."

"Some students helped in creative laboratory course in ChE. Dept."

"A research area established within the Dept."

"Aided in starting the Energy Information Center of UNM jointly with TAC."

"Further use to the outside community in the form of future Energy Info. Ctr. publications."

Dr. Cox, Chem. & Nuclear Engr.

"It has helped locate references useful in writing grant proposals and research papers."

"It has been of some indirect value to my graduate students who have obtained references from me. It will be very useful for my teaching of a 400-level course in the area."

Dr. Crawford, Biology

"Saving of my time. The TAC search is relatively thorough and covers different bases than I would normally use. Saving of students' time. Dissertations and theses are more readily defined and carried out."

"Soft money from contracts is of benefit to the department and the university."

Dr. Feldman, M.E.

"The search was just completed. I anticipate that it will be of great value to me, to students majoring in organizational behavior, and, in fact, to academicians and practicing managers throughout the country."

Dr. Finston, Business

"Probably a more thorough search than I would be able to do."

"Making available a large portion of the literature on a subject in a summary document."

"Facilitating proposal preparation."

Dr. Gosz, Biology

"I have had such a poor experience in finding material in the Library. It is very helpful to have access to other references."

Dr. Giesler, Continuing Education

"It saved me an enormous amount of time."

"It showed the students what could be done with a computer based literature search."

"Eventually research funding may come from the State or U.S. as an indirect result of work on water quality which the literature search was used to support."

"More money eventually and better student training. The people of New Mexico will ultimately benefit (hopefully) through improved water quality."

Dr. Hadley

"Our search was helpful personally since I wished to know more about library management techniques for my own work. Insofar as library work (processing) is involved, there has been no immediate application. However the study may prove helpful in future planning."

"The study has statewide application, since it was used as preparation for a statewide workshop on library management which took place on January 19, 1974. Over 75 librarians from public, state, school, special and academic libs. attended."

Mary Ellen Hanson, Library

"I have used the material as part of my work with the Governor's Energy Task Force on Geothermal Energy. Most of the references are unfortunately not accessible from our library, however."

"Students will be using the material now that three students are RA's on a geothermal project."

Dr. Jiracek, Geology

"It has provided a good indication of recent work in this area, bringing to my attention several important papers which I had not been aware of. In addition many significant peripheral papers were cited."

"If I have graduate students working on this or related problems in the future, it provides an excellent literature survey for their use."

"It has been used by two research associates (post-doctoral students) in the Department of Biology."

Dr. Johnson, Biology

"Saved me hundreds of hours in literature search--even though I had a good start into the subject!"

"Brought students exposure to more current and comprehensive literature."

"Possible research grant to fund some studies that the TAC dealt with. Input of additional research and development of new expertise in department--TAC reports make these efforts much easier."

Dr. Landis, Geology

"The information could not have been found by a manual search. As such, it provided information unavailable from any other means."

Linda Lewis, Library

"Gave me an instant overview of field. Indicated "hot spots" in research. Saved much work, working with unfamiliar library materials. Will benefit department when research suggested by search is completed."

Dr. McLaughlin, Chemistry

"It saved me a great deal of time and searched data-bases to which I would not otherwise have had access."

"It provided my students with up-to-date citations to much relevant literature on an important environmental problem. Students in the Architecture Department are generally weak in research abilities, so this service was of particular value to them."

"The State's citizens will all ultimately benefit as we make a contribution to the solution of the environmental problems associated with feedlots."

Dr. Montague, Architecture

"Exceedingly valuable. Has furthered my research a great deal."

"Has been of value to students in that my research has led to use in classroom teaching and undergraduate research."

Dr. Norman, Psychology

"Provides the valuable information for publication needs. Provides students research materials."

Dr. Rubio, HPER

"It will be extremely valuable to me in the development and implementation of three research projects--references and other similar research and their results are vital aspects of the research I am conducting."

"Findings of other studies could benefit the criminal justice system and the community of Albuquerque. It is possible that new programs might be attempted on the basis of the finding."

Mrs. Schenkel, Criminal Justice

"Because of information overloads, a search such as you undertook for me makes it easier for all of us to get our job done more efficiently and effectively."

Dr. Slate, Business

"Assistance to me in course preparation and research. I sent study over to Sandia Labs. They found it helpful."

Dr. Sorenson, Political Science

"Saves time, does a better job. Also these searches give a feeling of completeness that often can be lacking in usual ones."
Dr. Vanderborgh, Chemistry

"Provides rapid, comprehensive survey of literature on the subject."
"Values are chiefly the time saved for me and my students to do useful work."
Dr. Walters, Chemistry

"Very helpful in preparation of research proposals."
"Saves much time for students on thesis and dissertation."
"Primarily direct support for research programs."
Dr. Whan, Chemical & Nuclear Engr.

"The search on 'Acupuncture' has already been valuable in helping us to organize a research approach: What types of things are people doing, and not doing, etc. This can be gleaned simply from the titles. Specific papers will, of course, be more helpful as we focus in on a specific area or topic. A graduate student and I have already begun to outline more research to be done this summer. Hopefully, the student will write his dissertation in this area."
Dr. Williams, Electrical Engineering

"Personal satisfaction and confidence gained from knowing that the literature available has been examined."
Dr. M.L. Riedesel, Biology

"Research--any university research--is of educational value. New research benefits students, department, Engineering College, University."
Dr. Frederick Ju, Chairman,
Mechanical Engineering

"Saves hours of professional time."
"Students learn the best and most recently available literature--can compete with better schools."
"Helps push UNM into more up-to-date league."
Dr. Bogart, Sociology

"Savings in time which can now be spent in using the TAC product in research, and in teacher preparation."
"Graduates can learn this technological aid; all levels can have referral to sources provided to the professor."
"Sharing of documents among faculty with common interests (would like to see an additional copy of the TAC product for departmental libraries)."
"Hopefully will keep faculty 'on top' of area and present a knowledgeable image for the university."

Dr. Civikly, Speech

"Saved me time and energy--gave students new information and resources (quickly)."

Dr. Goldhaber, Speech

"Discovery of additional references that I was completely unaware of."
"Formed basis for a paper that I presented on change and strategies for change in organizations in education."

Dr. Lersten, HPER

"Enormous savings in time."
"Encourages research, saves faculty time, improves graduate study."

Dr. Moellenburg, Educational Foundations

"Helped prepare two major publications and brought me up to date for teaching Intro to Graduate Study."
"Students will be better informed and (some) will have a couple of top-rated books to read."

Dr. Pace, Speech Communication

"Great for me--even greater for students."
"Sex Offender Program in city used the information--were very happy to have it."

Dr. Roll, Psychology

"Helps me (a) teach my classes better (the material is applicable to all the classes I teach), (b) prepare the manuscript for a book I am writing (on the social-psychology of education), and (c) helps my students by serving as a comprehensive bibliography for them."

"My marriage is more secure given that I can spend the time I would in the library at home (or at least some of it)!"

"Saved at least one year of full-time work."

Dr. Rosenfeld, Speech

"Literature search this year was used as preparation for and suggested readings for grad. class. Was of great value in both respects."

Dr. Wagoner, Education